

## PATENT CLAIMS

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A device for measuring and/or verifying components of optical and/or electrical networks with a case (2) and an optical and/or electrical connection jack (5) located on the case (2) to which an optical guide and/or electrical lead (8) can be connected directly or indirectly via an adapter (9), wherein a lift device (11) is provided with which the connection jack (5) can be adjusted relative to the case (2) between a lifted position and a lowered position,

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wherein the lift device (11) is equipped with a spring mechanism (26) that pre-tensions the connection jack (5) in the lifted position and with an engaging mechanism (12) that can be operated by a pressure force in lowering direction and locks into the connection jack (5) in its lowered position, wherein in a first pressure operation the connection jack (5) is moved from its lifted position to its lowered position where the engaging mechanism (12) is engaged, and a subsequent second pressure operation releases the locking (18) of the engaging mechanism (12) so that the spring mechanism (26) moves the connection jack (5) to its lifted position.

2. A device according to claim 1, wherein:

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- the engaging mechanism (12) is equipped with a guiding link (13) and an adjustable gliding pin (14) therein,
  - the gliding pin (14) (or the guiding link (13)) is stationary with respect to the connection jack (5), while the guiding link (23) (or the gliding pin 14)) is stationary with respect to the case (2),
  - the guiding link (13) is equipped with a guiding groove (15) in which the gliding pin (14) locks in and in which the gliding pin (14) moves in an adjustment direction when the connection jack (5) is lifted or lowered,
  - the guiding groove (15) is designed such that the gliding pin (14)

- comes into contact with a first stop (16) in a first lower reversing position, which is lower than the lowered position, when the connection jack (5) is lowered from its lifted position,
- comes into contact with a lock (18) in its lowered position, located after the first stop (16) with respect to the adjustment direction of the gliding pin (14), when the connection jack (5) is subsequently lifted from this first lower reversing position,
- comes in contact with a second stop (17) in a second lower reversing position, located after the lock (18) with respect to the adjustment direction of the gliding pin (14), when the connection jack (5) is subsequently lowered from its lowered position,
- passes by the lock (18) and reaches the lifted position when the connection jack (5) is subsequently lifted from this second lower reversing position, wherein redirection mechanisms are provided that ensure that the gliding pin (14) in the guiding groove (15) is moved to the first stop (16) rather than to the second stop (17) when the connection jack (5) is lowered from its lifted position.

3. A device according to claim 2 wherein the redirection mechanisms are created by suspending the guiding link (13) swingable and shaping the guiding groove so that the gliding pin (14) forces a swivel movement of the guiding link (13) when it is lifted from the second lower reversing position to the lifted position, such that the guiding pin (14) in the guiding groove (15) is directed towards the first stop (16).

4. A device according to claim 3, wherein the guiding link (13) is suspended swingable but with relatively high friction.

5. A device according to claim 1, wherein the lift device (11) contains spring mechanisms (26), which pre-tension the connection jack (5) to the lifted position, and the lift device (11) is equipped with damping mechanisms (44, 45, 46) that dampen the shifting motion of the connection jack (5) created by the spring mechanisms (26).

6. A device according to claim 5, wherein the damping mechanisms are equipped with a gear wheel (45) that is connected to a gear bar (46) and rolls along this gear bar (46) when the connection jack (5) is lifted or lowered, wherein the gear wheel has relatively high friction.
7. A device according to claim 1, wherein the lift device (11) is equipped with a safety mechanism (34, 40, 41) creating a first locking (47) when the lifted position of the connection jack (5) is reached and hinders the lowering of the connection jack (5), wherein a release mechanism (37) is provided, which releases the first locking (47) when triggered, thus allowing the connection jack (5) to be lowered.
8. A device according to claim 7, wherein the safety mechanism (34, 40, 41) has an overload protection that releases the first locking (47) if a force is exerted in lowering direction on the connection jack (5) or on a construction part (29) of the lift device (11) connected to it and this force is larger than the permissible force.
9. A device according to claim 1, wherein the lift device (11) is equipped with a safety mechanism (34, 40, 42) creating a second locking (48) when the lowered position of the connection jack (5) is reached and hinders the further lowering of the connection jack (5), wherein a release mechanism (37) is provided, which releases the second locking (48) when triggered, thus allowing the connection jack (5) to be lowered.
10. A device according to claim 7, wherein the safety mechanism contains a swingable lever (34), which is stationary with respect to the connection jack (5) and wherein the lever may be driven by the release mechanism (37) on one side of its suspension (35) and is equipped with at least one locking nipple (4) on the other side of its suspension (35), wherein in the lifted position of the connection jack (5), the locking nipple locks into the first locking ledge (41), which is stationary with respect to the case (2), creating the first locking (47), and/or locks into a second locking ledge (42), which is stationary with respect to the case (2), creating the second locking

(48), when the connection jack (5) is in its lowered position.

- 5 11. A device according to claim 1, wherein the electrical and/or optical connection between the connection jack (5) and the connected lead (8), or between the connection jack (5) and the adapter (9) connected to it works in any position of the connection jack (5).
- 10 12. A device according to claim 1, wherein a cover cap (7) is suspended from the case (2) that can cover a lifting space in which the connection jack (5) can be adjusted.
- 15 13. A device according to claim 12, wherein the lifting space of the connection jack (5) is chosen such that an adapter (9) connected to the connection jack (5) is inside the lifting space in the lowered position.
- 20 14. A device according to claim 1, wherein the device (1) contains a TDR or is designed as a TDR.
- 25 15. A device according to claim 1, wherein the device (1) contains an OTDR or is designed as an OTDR.
- 30 16. A device according to claim 1, wherein the device (1) contains a WDM or is designed as a WDM.
17. A lift device for lifting and lowering an electrical or optical connection jack (5) of a device (1), in particular a device (1) for measuring and or verifying components of optical and/or electrical networks, containing spring mechanisms (26) that pre-tension the connection jack (5) in its lifted position and an engaging mechanism (12), operated by a pressure force in lowering direction, wherein the engaging mechanism locks in the lowered position of the connection jack (5), and with the first pressure triggering, the connection jack (5) is moved from its lifted position to its lowered position, in which the engaging mechanism (12) locks, and a second pressure

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triggering releases the locking (18) of the engaging mechanism (12) so that the spring mechanisms (26) move the connection jack (5) to its lifted position.

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